AEC III (M2, M3, M5, M7, M8)

MODULES (M)		Module Tasks & Representative Subtasks	Percent of All Tasks
MODULE 2:		**Typical Laboratory tests of soils**	**15%**
TASK M 2.1	-	USCS Classification System (ASTM ASTM D 2487)	
Subtasks:	1	Understand the test	
	2	Perform the test	
	3	Understand factors that may affect test results	
TASK M 2.2	-	Visual Identification of soils (ASTM D 2488)	
Subtasks:	1	Understand the test	
	2	Perform the test	
	3	Understand factors that may affect test results	
MODULE 3:		**Advanced Laboratory Tests of Soils**	**4%**
TASK M 3.1	-	Consolidation Test (ASTM D 2435)	
Subtasks:	1	Understand test results	
TASK M 3.2	-	Percent Water-Soluble Sulfates Test (AWWA 4500-E)	
Subtasks:	1	Understand test results	
TASK M 3.3	-	Expansion Potential Tests (ASTM D 3877) & Swell Test (SNBCA 1803.2)	
Subtasks:	1	Understand test results	
TASK M 3.4	-	Solubility Tests (AWWA 2540)	
Subtasks:	1	Understand test results	
MODULE 5:		**Grading plans & construction staking**	**20%**
TASK M 5.1	-	Grading Plans	
Subtasks:	1	Identification of natural, existing, and design contours	
	2	Identification of Cut/fill line	
	3	Identification of cut/fill transition	
	4	Identification of cut areas	
	5	Identification of fill areas	
	6	Identification of extent of grading within the Permit Area	
	7	Understand grading plan details	
	8	Understand topography depicted on grading plans	
	9	Identification of project occurrences on grading plans (overexcavation limits, stockpiles, etc.)	
	10	Identification of project occurrences on grading plans (fill keys, transition lots, rock fills, etc.)	

MODULES (M)		Module Tasks & Representative Subtasks	Percent of All Tasks
TASK M 5.2	-	Construction Staking	
Subtasks:	1	Understand the use of construction or surveys stakes	
	2	Identify various markings used on construction or survey stakes	
MODULE 7:		**Basics of grading operations of low-risk projects, i.e., grading projects with no adverse soil conditions**	**27%**
TASK M 7.1	-	**Implementation of Laboratory test results during grading operations**	
Subtasks:	1	Implementation of sieve analysis test results	
	2	Implementation of MDD-OMC test results	
	3	Implementation of Atterberg limits test results	
	4	Implementation of expansion test results	
	4	Implementation of solubility test results	
TASK M 7.2	-	**Shallow Foundations, Retaining Walls, Geosynthetics-reinforced soils**	
Subtasks:	1	Identify foundation details	
TASK M 7.3	-	**Earthwork Construction**	
Subtasks:	1	Be familiar with general soil conditions in the Las Vegas Valley and the standard practice dealing with typical soil conditions	
	2	Identify competent soil for cleanouts or overexcavation	
	3	Identify competent soil or bedrock for cleanouts, or overexcavation	
MODULE 8:		**basics of grading operations of high-risk projects, i.e., grading projects with adverse soil conditions including hillside grading**	**34%**
TASK M 8.1	-	**Geotechnical Reports**	
Subtasks:	1	Understand boring logs	
	2	understand site geology	
	3	Understand project soils conditions	
	4	Understand report's earthwork construction recommendations (overexcavation, fill material, compaction, etc.)	
TASK M 8.2	-	**Adverse Soil Conditions (Expansive, hydrocollapsible, soluble or salt-laden soils, soil-rock and rock fills)**	
Subtasks:	1	Identify above soil conditions	
	2	Understand the various tests) that may assist in field identification of above soil conditions	
	3	Verify that approved recommendations addressing above soil conditions are implemented	
	4	Verify by observation and/or testing proper placement and compaction of above soil conditions	

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MODULES (M)		Module Tasks & Representative Subtasks	Percent of All Tasks
TASK M 8.3	-	**Adverse Soil Conditions: Mechanicallys-stabilized soils (Geosynthetics) and Chemically stabilized soils (lime, cement, others)**	
Subtasks:	1	Understand the criteria used in differentiating the above soil conditions	
	2	Identify from the geotechnical report or existing field conditions the presence of any of the above soils conditions	
	3	Understand the various tests) that may assist in field identification of above soil conditions	
TASK M 8.4	-	**Adverse Soil Conditions (Hillside Grading)**	
Subtasks:	1	Understand the criteria used in identifying hillside grading	
	2	Identify competent soil or bedrock for cleanouts, or overexcavation, or benching	
	3	Understand the need for fill keys	
	4	Understand the impact of site geology and topography on hillside grading	
	5	Understand the geotechnical report's earthwork construction recommendations related to hillside grading	
	6	Understand Clark County Codes related to hillside grading (SNBCA, UBC, etc.)	
TASK M 8.5	-	**Geology**	
Subtasks:	1	Regional setting	
	2	Regional geology	
	3	Regional hydrogeology	
	4	Alluvial soils of the Las Vegas Valley	
	5	Compaction faults	
	6	Fissures	
			Total AEC III 100%
		Number of Tasks is	
		16	